REMARKS/ARGUMENTS

This paper is submitted in response to the Office Action mailed September 10, 2007. Reconsideration is respectfully requested.

Claims 1-24 were examined. All of the examined claims stand rejected under 35 U.S.C. §102(b) as anticipated by US 6,476,830 – Farmer et al. ("Farmer"). This rejection is respectfully traversed.

Amendments to the Specification

Minor amendments to the specification have been made to correct typographical errors. No new matter has been added.

Background

A principal objective of the present invention is to maintain the integrity of a virtual environment that is populated by both avatars and props so that events arising in the virtual world appear to realistically mimic the real world. Two scenarios that can cause disruption to the integrity of a virtual environment are i) interactions between objects, in particular between avatars and props, and ii) the attachment of an object to another object; for example, animations depicting a scene involving an avatar (e.g., a character) holding a prop (e.g., a glass).

Designers have traditionally dealt with the first situation by trying to predict all possible interactions that may arise among the objects within a virtual scene, and then creating a bespoke animation for each interaction. As a consequence of the workload involved in creating bespoke animations, designers have had to compromise the integrity of a scene by restricting the interactions that are actually available within a particular scene.

The second situation has been dealt with by trying to predict all possible combinations of objects that may arise and ensuring that an animation is available for each possible combination. Thus, it has been necessary to provide separate animations for the avatar with and without the prop.

Patentability over US 6,476,830 – Farmer et al. ("Farmer")

Farmer discloses systems implemented on a computer network that are intended to facilitate interaction and, in particular, pseudo-monetary exchange, between persons within a virtual community. The virtual community is populated by objects including one or more avatar objects, which may move through the virtual world, and one or more "portable virtual objects" (props), such as tokens, that may be dynamically attached to, or detached from, an avatar.

It may be seen, for example, from Table 33 of Farmer (column 32, line 20 to column 35, line 15) that the multi-part animations that an avatar may perform are defined for the avatar. Thus, a difference between the Farmer disclosure and the present invention, as defined, for example, by independent claims 1, 18, and 24, is that, according to these claims, a prop has associated with it "information defining one or more animations which may be performed by the avatar when said avatar interacts with the prop." In other words, a key aspect of the present invention is that it uses "prop-centric" animations. This feature therefore represents a distinction between the present invention and the disclosure of Farmer.

Viewed another way, the claimed subject matter differs from that of Farmer in that, unlike Farmer, in the invention defined in claims 1-24, the avatar is "operable to query the prop for the information defining animation that the avatar is to perform when the avatar interacts with the prop." This feature is apparently lacking in the Farmer disclosure.

The technical effect of the aforementioned differences between the Applicant's claimed invention and the Farmer disclosure is that, in the claimed invention, the integrity of the virtual environment is maintained, even when major changes take place in a virtual scene. For example, consider the situation in which a new prop is to be "dropped" (term used in the art) into an existing virtual scene. Previously in this situation, a designer would have to predict all of the interactions between that new prop and the objects already populating the scene. It would then be necessary to create bespoke animations for each predicted interaction, and this would involve editing the animation library associated with each of the avatars within the scene.

According to the claimed invention, a designer (who may be a user of an animation system embodying the present invention) can create a new prop for an existing virtual scene and may write animations that areto be performed during an interaction between that new prop and the existing avatars. The information defining these animations will be associated with the prop, so that when the prop is introduced into the virtual world, it will immediately be able to interact with the avatars in the scene. Thus, it is not necessary to edit the avatar animation files, and therefore the workload of the graphic designer is greatly reduced.

Furthermore, the present invention is particularly useful as an authoring tool (i.e. a computer animation system which allows a user to build or modify a virtual environment and create animation sequences for later reply or editing), since it provides a simple mechanism for creating and editing new objects for a virtual environment.

Nothing in Farmer either teaches or suggests that information defining an animation to be performed by an avatar could be associated with a prop, rather than with the avatar itself. Indeed, it is respectfully submitted that this feature of the claimed invention is actually counter intuitive, since animations are primarily performed by avatars (e.g. characters) rather than props (e.g. chairs etc), and it is therefore logical for the information defining the animations to be associated with (e.g., constitute a state machine of) the avatar that will perform it. The present invention, as defined in claims 1-24, has therefore gone against accepted thinking in the art, as exemplified by Farmer, and has arrived at a solution that provides significant advantages over the prior art.

A further advantage of the present invention relates to the elegant way in which prop-centric animation allows for the simultaneous occurrence of an interaction between two objects and the attachment of one of those objects to another object. This feature is clearly defined in independent claims 1, 18, and 24, which require that "when the prop is dynamically attached to another object, the information defining the animation(s) to be performed by one or more of the avatars during an interaction with the prop, remains associated with the prop." Again, there no suggestion of this feature in Farmer. Such a feature would be analogous to the avatar of Farmer picking up the ATM machine, and other avatars still being

able to interact with the ATM machine by querying the ATM machine for information about the animation it is to perform during that interaction.

In summary, the subject matter defined in claims 1-24 is neither taught nor suggested by farmer, which, in fact, teaches *away from* the claimed invention. Therefore, it is respectfully submitted that claims 1-24 define patentably over the cited art and should be allowed.

Passage of the application to issue is therefore earnestly solicited.

Respectfully submitted,

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HOWARD J. KLEIN
Registration No. 28,727

Klein, O'Neill & Singh, LLP (Customer No.: 22145)
43 Corporate Park, Suite 204
Irvine CA 92606
Tel: (949) 955-1920
Fax: (949) 955 1921

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